AV–1852

B.C.A. (Part–II) Semester–III Examination

ADVANCED OPERATING SYSTEM

Paper—3ST4

Time : Three Hours]   [Maximum Marks : 60

Note :— (1) All questions are compulsory.

(2) All questions carry equal marks.

(3) Assume suitable data wherever necessary.

1. (a) Explain the terms :

(1) Process descriptor

(2) Execution context

(3) Process table.   6

(b) What is the need of an operating system ? How an operating system is evolved ? Explain.
                                                                                                        6

OR

2. (a) Explain process control block in process management.   6

(b) Explain the terms suspend and reserve in detail.   6

3. (a) Explain parallel processing in detail.   6

(b) State and explain Peterson's theorem.   6

OR

4. (a) Differentiate the semaphores P and semaphores V.   6

(b) What is mutual exclusion in process execution ? Explain.   6

5. (a) What is deadlock ? Explain four necessary conditions for deadlock. 6

(b) State and explain Banker's algorithm.   6

OR

6. (a) What is deadlock prevention ? Explain.   6

(b) Explain deadlock avoidance with Dijkstra's Banker's algorithm.   6

7. (a) Explain the term page replacement in detail.   6

(b) What criteria to be used for deciding processor scheduling algorithm. 6

OR

8. (a) Explain the various storage allocation techniques in detail.   6

(b) Explain demand paging in detail.   6

9. (a) State and explain difference between preemptive and non-preemptive scheduling. 6

(b) Explain multilevel feedback queue.   6

OR

10. (a) Explain the term job scheduling and processor scheduling with suitable example. 6

(b) Explain scheduling objective and criteria.   6